

Nebraska's Legislative Planning Database

Natural Resources

This benchmark examines Nebraska's natural resources by reviewing four broad areas: Air quality, Land quality and waste, Water quality, and Energy. The most currently available data at the time the data files were put together are used. Additional information can be found from the Department of Natural Resources <http://www.dnr.state.ne.us/>, the Department of Environmental Quality <http://www.deq.state.ne.us/>, and the Nebraska Energy Office <http://www.neo.ne.gov/>.

Air Quality

As measured by air pollution emissions, Nebraska's air quality was high. In 2009, Nebraska recorded 8.0 micrograms of fine particles per cubic meter. This was the 42nd lowest in the nation and in the middle of the region. Colorado, South Dakota, North Dakota, and Wyoming had lower levels of emissions.

Land Quality and Waste

Nebraska recorded 13 hazardous waste sites on the national priority list in 2008. This was the 20th largest number of sites in the United States. For toxic chemical releases in 2007, Nebraska was among the highest in the region but ranked 32nd nationally. However, for toxic surface water discharges Nebraska ranked highest regionally and 3rd in the nation.

Nebraska's community water systems were more likely to have reported health-based violations than its neighboring states in 2009. In fact, at 23.0 percent of its community water systems with reported health-based violations, Nebraska was more than 10 percentage points higher than any of its neighboring states. These community water systems were mostly likely to be smaller, as the 23.0 percent of the systems represented 11.1 percent of the population served.

Energy

Electricity in Nebraska costs less than the United State, and the gap is widening. In 2008, the average price per kilowatt hour was 6.58 cents in Nebraska and 9.74 cents nationally. Nebraska's cost was 67.6 percent of the national cost in 2008, a significant drop from 84.8 percent of the national average in 1990. It is interesting to note that Nebraska's 2008 cost of 6.58 cents per KHW was about the same as the national average (6.57 cents per KWH) in 1990. Nebraska's electricity cost ranked 45th nationally. Wyoming was the only state in the region with lower electricity costs.

Nebraska was a relatively high user of energy, but because of lower costs, energy expenditures were not as high. In 2006, Nebraska's energy consumption was 374 million BTUs per person. This ranked 18th when compared to the national average. The coal and oil producing states of Wyoming and North Dakota were by far the largest energy consumers in the region. In 2006, Nebraska spent more than \$7.1 million on energy. This ranked 38th nationally.

The cost of electricity varied widely throughout the state. The cheapest power in the state during 2008 was produced by the Western Area Power Administration (hydro power) at 2.18 cents per KWH. The most expensive was from the Niobrara Electric Association at 12.54 cents per KWH.

Nebraska ranked relatively low in the percentage of electricity generated through renewable resources. Nationally, 8.5 percent of the electricity generated in 2007 came from renewable resources, but only 1.9 percent of Nebraska's electricity was generated from renewable resources. Nebraska ranked 42nd in the generation of electricity using renewable resources. In the region, South Dakota ranked 4th nationally, generating 50 percent of its electricity from renewable sources, most likely hydroelectricity.

Nebraska Legislative Planning Database - Natural Resources

Air Quality

Air Pollution Emissions, Regional Comparison: 2009

Source: America's Health Rankings (2009), United Health Foundation

State	Micrograms of Fine Particles per Cubic Meter		Rank
Missouri	11.9		18
Iowa	10.5		28
Kansas	9.9		32
Minnesota	8.6		39
Nebraska	8.0		42
Colorado	7.7		43
South Dakota	7.5		46
North Dakota	5.6		49
Wyoming	5.3		50

Note: The average exposure of the general public to particulate matter of 2.5 microns or less in size (PM2.5).

Land Quality and Waste

Hazardous Waste Sites on the National Priority List: 2004 and 2008

Source: U.S. Environmental Protection Agency, Supplementary Materials (2004 and 2008)

State	Total Sites		2008 Rank
	2004	2008	
United States	1,286	1,301	
North Dakota	0	0	1
South Dakota	2	2	4
Wyoming	2	2	4
Iowa	13	12	15
Kansas	12	12	15
Nebraska	12	13	20
Colorado	18	20	32
Minnesota	24	25	34
Missouri	26	29	36

Toxic Chemical Releases: 2007

Source: U.S. Environmental Protection Agency, Toxic Release Inventory (TRI) Program, 2007

State	Total On- and Off-site Releases	Rank
United States	4,080.00	-
Missouri	96.8	16
Iowa	43.4	29
Nebraska	32.9	32
Minnesota	28.1	34
Kansas	26.2	35
Colorado	24.4	36
North Dakota	22.1	38
Wyoming	15.5	42
South Dakota	7.8	44

Toxic Releases: Total Surface Water Discharges: 2007

Source: U.S. Environmental Protection Agency, Toxic Release Inventory (TRI) Program, 2007

State	Toxic Releases (Pounds)	Percent of National Total	Rank
United States	231,680,711	-	-
Nebraska	17,409,779	7.5	3
Iowa	3,445,959	1.5	21
Colorado	3,357,389	1.4	23
South Dakota	2,424,482	1.0	29
Minnesota	2,072,875	0.9	30
Missouri	1,690,965	0.7	32
Kansas	586,162	0.3	35
North Dakota	82,123	0.0	42
Wyoming	9,916	0.0	47

Water Quality

Water System Data: 2009

State	CWS	NTNCWS	TNCSW	Total	Ground	Surface	CWSs with Reported Health-Based Violations	
							Number	Percent
<u>Colorado</u>								
Number of Systems	860	169	993	2,022	1,504	518	92	10.7
Population Served	5,264,265	74,354	250,546	5,589,165	716,451	4,872,714	165,381	3.1
<u>Iowa</u>								
Number of Systems	1,134	133	683	1,950	1,799	151	71	6.3
Population Served	2,685,264	47,390	80,908	2,813,562	1,510,584	1,302,978	92,106	3.4
<u>Kansas</u>								
Number of Systems	895	48	90	1,033	654	379	110	12.3
Population Served	2,572,953	20,645	4,195	2,597,793	708,785	1,889,008	170,152	6.6
<u>Minnesota</u>								
Number of Systems	958	523	5,781	7,262	7,149	113	59	6.2
Population Served	4,191,398	78,401	536,240	4,806,039	3,467,539	1,338,500	205,420	4.9
<u>Missouri</u>								
Number of Systems	1,478	250	1,057	2,785	2,538	247	195	13.2
Population Served	5,175,712	76,761	116,403	5,368,876	1,851,384	3,517,492	276,645	5.3
<u>North Dakota</u>								
Number of Systems	332	24	152	508	399	109	19	5.7
Population Served	568,478	3,658	13,893	586,029	265,824	320,205	13,265	2.3
<u>Nebraska</u>								
Number of Systems	596	162	566	1,324	1,264	60	137	23.0
Population Served	1,478,839	52,263	53,618	1,584,720	745,620	839,100	164,688	11.1
<u>South Dakota</u>								
Number of Systems	457	26	173	656	515	141	57	12.5
Population Served	686,897	8,180	22,977	718,054	312,723	405,331	35,296	5.1
<u>Wyoming</u>								
Number of Systems	308	89	378	775	637	138	20	6.5
Population Served	444,979	23,369	74,672	543,020	196,626	346,394	7,576	1.7

Notes:

CWS = Community Water System: A public water system that supplies water to the same population year-round.

NTNCWS = Non-Transient Non-Community Water System: A public water system that regularly supplies water to at least 25 of the same people at least six months per year, but not year-round. Some examples are schools, factories, office buildings, and hospitals which have their own water systems.

TNCWS = Transient Non-Community Water System: A public water system that provides water in a place such as a gas station or campground where people do not remain for long periods of time and is open at least 60 days/year.

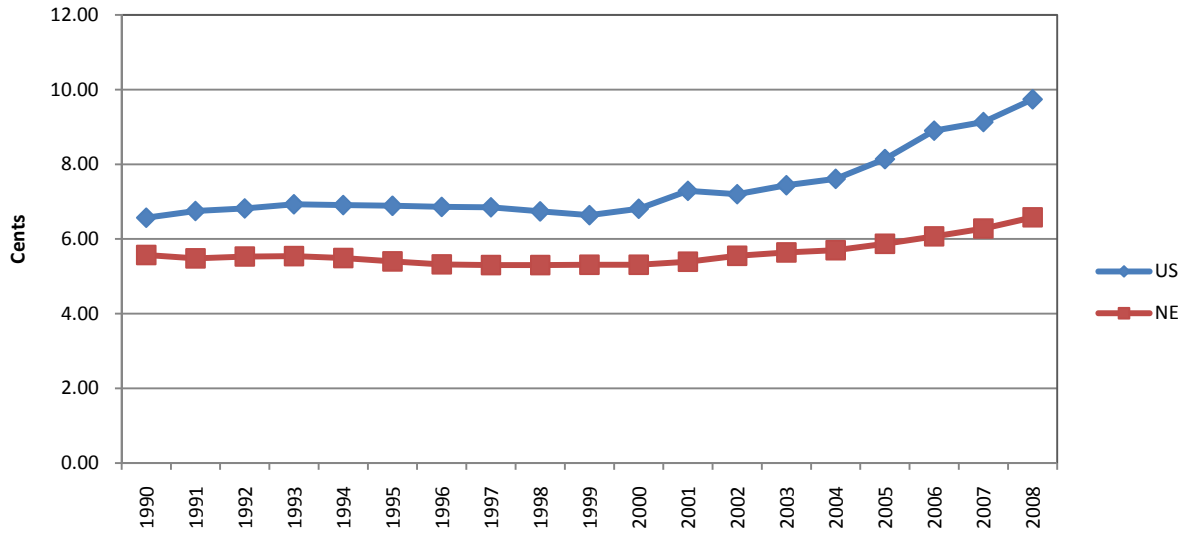
Energy

Average Price per Kilowatt Hour: United States and Nebraska (1990-2008)

Source: Electric Power Annual (2008), Independent Statistics and Analysis, U.S. Energy Information Administration

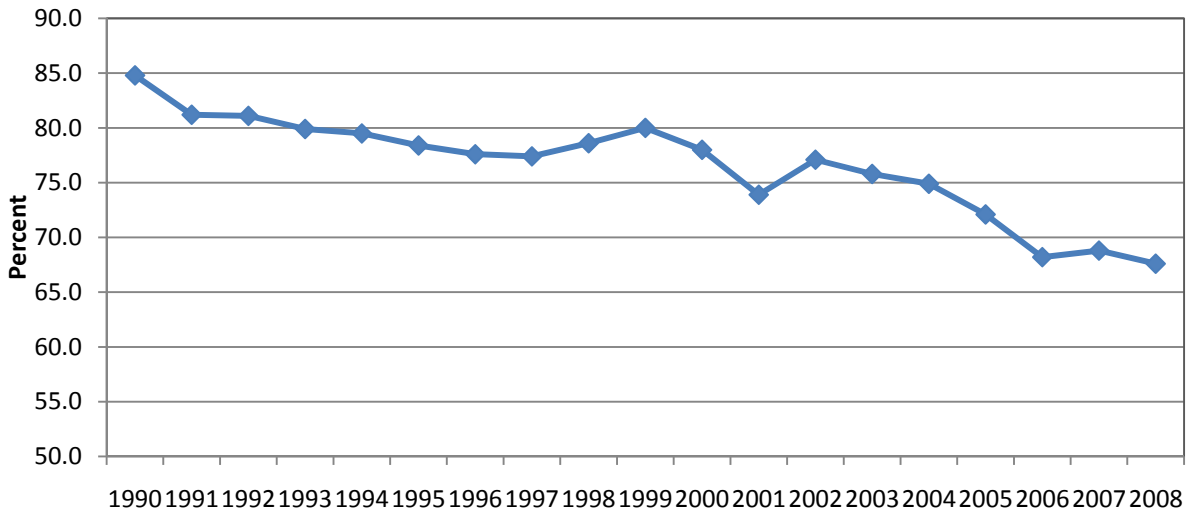
Year	Average Price by Provider (Cents per Kilowatt Hour)		NE as a % of US
	United States	Nebraska	
1990	6.57	5.57	84.8
1991	6.75	5.48	81.2
1992	6.82	5.53	81.1
1993	6.93	5.54	79.9
1994	6.91	5.49	79.5
1995	6.89	5.40	78.4
1996	6.86	5.32	77.6
1997	6.85	5.30	77.4
1998	6.74	5.30	78.6
1999	6.64	5.31	80.0
2000	6.81	5.31	78.0
2001	7.29	5.39	73.9
2002	7.20	5.55	77.1
2003	7.44	5.64	75.8
2004	7.61	5.70	74.9
2005	8.14	5.87	72.1
2006	8.90	6.07	68.2
2007	9.13	6.28	68.8
2008	9.74	6.58	67.6

Average Price per Kilowatt Hour: United States and Nebraska (1990-2008)



Source: Electric Power Annual (2008), Independent Statistics and Analysis, U.S. Energy Information Administration;

Average Price per Kilowatt Hour: Nebraska as a Percentage of the United States (1990-2008)



Source: Electric Power Annual (2008), Independent Statistics and Analysis, U.S. Energy Information Administration;
Prepared by Center for Public Affairs Research, UNO; Jul 2010

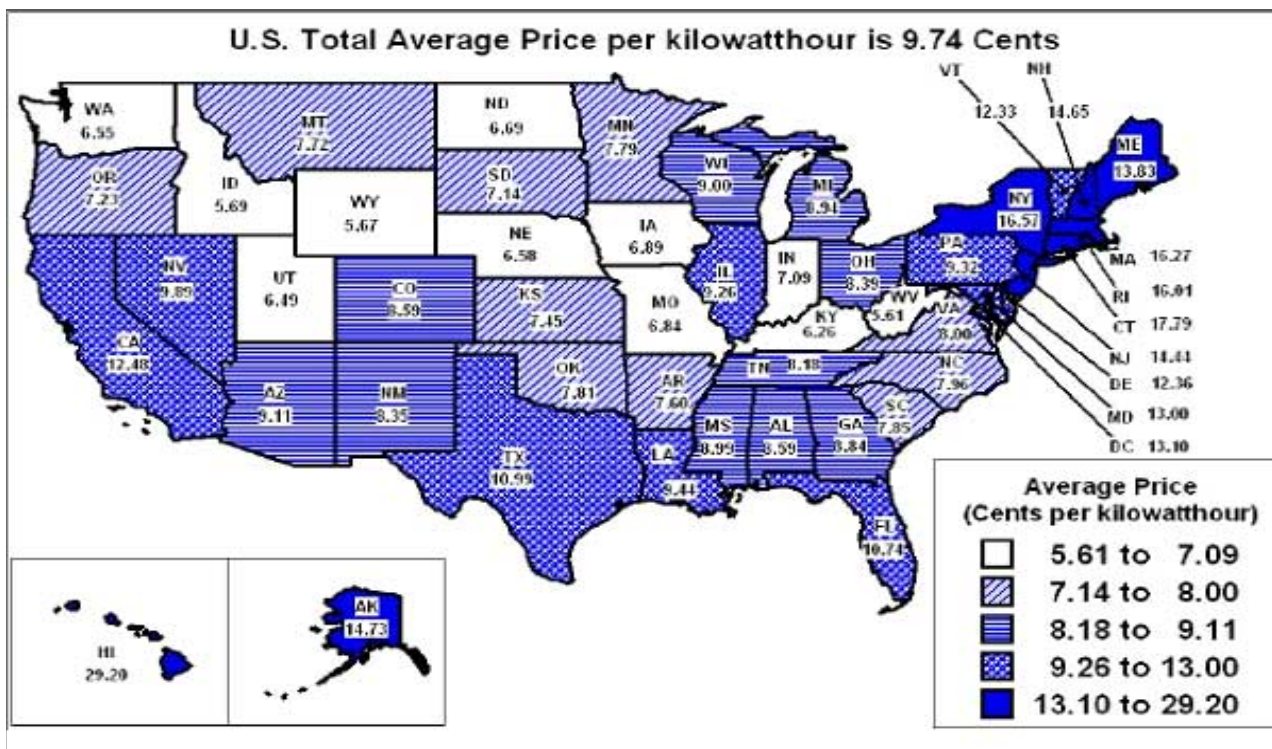
Average Price: 2008

Source: Electric Power Annual (2008), Independent Statistics and Analysis, U.S. Energy Information Administration

State	Cents per Kilowatt Hour	Rank
Colorado	8.59	27
Minnesota	7.79	35
Kansas	7.45	38
South Dakota	7.14	40
Iowa	6.89	42
Missouri	6.84	43
North Dakota	6.69	44
Nebraska	6.58	45
Wyoming	5.67	50

Average Retail Price of Electricity by State: 2008

Source: U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."



Energy Consumption Per Person: 2006

Source: State Energy Data 2006, Independent Statistics and Analysis, U.S. Energy Information Administration

State	Consumption per Person	
	(Million BTU)	Ranking
Wyoming	937.9	2
North Dakota	644.1	4
Iowa	406.2	14
Kansas	381.3	16
Nebraska	373.8	18
Minnesota	353.5	19
South Dakota	344.9	24
Missouri	327.7	28
Colorado	299.6	39

Energy Expenditures: Regional Comparison: 2006

Source: State Energy Data 2006, Independent Statistics and Analysis, U.S. Energy Information Administration

State	Expenditures (Million Nomin al Dollars)	
		Ranking
Missouri	21,533	17
Minnesota	19,948	21
Colorado	16,251	26
Iowa	13,368	29
Kansas	10,719	33
Nebraska	7,133	38
Wyoming	4,323	45
North Dakota	3,548	47
South Dakota	3,167	49

Retail Price by Utility for Nebraska Subdivisions: 2008

Source: U.S. Department of Energy

Utility Name		Total Revenue (\$000)	Total Sales (MWh)	Total Consumers	Average Price (Cents per kWh)
Auburn Board of Public Works	Municipal	3,898	61,564	2,922	6.33
Beatrice City of	Municipal	12,335	177,843	7,341	6.94
Burt County Public Power Dist	Political Subdivision	8,288	84,447	4,138	9.81
Butler County Rural P P D	Political Subdivision	9,813	104,885	6,403	9.36
Cedar-Knox Public Power Dist	Subdivision	11,324	154,059	6,953	7.35
Cherry-Todd Electric Coop, Inc	Cooperative Political	1,373	21,138	974	6.50
Chimney Rock Public Power Dist	Subdivision	5,899	51,574	2,946	11.44
City of Alliance	Municipal	7,650	113,324	5,324	6.75
City of Ansley	Municipal	350	4,203	331	8.33
City of Arapahoe	Municipal	1,032	10,053	685	10.27
City of Battle Creek	Municipal	903	11,282	574	8.00
City of Bayard	Municipal	835	8,367	625	9.98
City of Beaver City	Municipal	448	5,597	385	8.00
City of Benkelman	Municipal	839	10,014	668	8.38
City of Blue Hill	Municipal	509	7,975	450	6.38
City of Bridgeport Utilities	Municipal	1,125	15,644	895	7.19
City of Broken Bow	Municipal	3,949	79,526	2,321	4.97
City of Burwell	Municipal	940	12,920	714	7.28
City of Cambridge	Municipal	2,452	37,456	628	6.55
City of Central City	Municipal	2,495	31,201	1,637	8.00
City of Chappell	Municipal	637	9,408	834	6.77
City of Crete	Municipal	6,091	122,242	3,066	4.98
City of Curtis	Municipal	1,066	13,999	701	7.61
City of David City	Municipal	2,872	38,608	1,419	7.44
City of Deshler	Municipal	714	7,853	460	9.09
City of Edgar	Municipal	441	6,143	337	7.18
City of Emerson	Municipal	532	6,053	408	8.79
City of Fairbury	Municipal	5,742	83,841	3,242	6.85
City of Falls City	Municipal	3,516	50,233	2,718	7.00
City of Franklin	Municipal	951	9,791	696	9.71
City of Friend	Municipal	818	10,419	644	7.85
City of Gering	Municipal	6,134	60,945	3,938	10.06
City of Giltner	Municipal	298	3,333	218	8.94
City of Gothenburg	Municipal	3,586	57,378	1,824	6.25
City of Grant	Municipal	1,198	16,367	794	7.32
City of Hebron	Municipal	1,704	24,177	978	7.05
City of Hickman	Municipal	807	10,000	569	8.07
City of Holdrege	Municipal	6,577	126,311	3,086	5.21
City of Hubbell	Municipal	99	951	55	10.41

City of Imperial	Municipal	2,235	30,254	1,409	7.39
City of Indianola	Municipal	419	4,382	421	9.56
City of Kimball	Municipal	1,656	21,244	1,628	7.80
City of Laurel	Municipal	781	11,313	702	6.90
City of Lodgepole	Municipal	261	2,679	245	9.74
City of Lyons	Municipal	655	7,796	562	8.40
City of Nebraska City	Municipal	11,624	155,715	5,619	7.46
City of Neligh	Municipal	1,486	19,734	1,186	7.53
City of Nelson	Municipal	425	5,373	352	7.91
City of North Platte	Municipal	19,821	296,251	12,529	6.69
City of Ord	Municipal	1,853	30,836	1,434	6.01
City of Pender	Municipal	923	13,000	684	7.10
City of Pierce	Municipal	1,412	20,019	1,197	7.05
City of Plainview	Municipal	1,071	12,384	1,041	8.65
City of Randolph	Municipal	627	8,033	588	7.81
City of Red Cloud	Municipal	744	9,853	820	7.55
City of Schuyler	Municipal	7,780	138,428	2,581	5.62
City of Seward	Municipal	6,832	90,483	3,151	7.55
City of Sidney	Municipal	6,001	72,649	4,665	8.26
City of Snyder	Municipal	521	7,537	203	6.91
City of South Sioux City	Municipal	14,626	203,754	5,401	7.18
City of Spencer	Municipal	425	6,716	328	6.33
City of St Paul	Municipal	1,793	23,160	1,224	7.74
City of Stratton	Municipal	347	4,248	308	8.17
City of Stromsburg	Municipal	873	10,000	669	8.73
City of Stuart	Municipal	593	6,156	416	9.63
City of Superior	Municipal	2,027	21,696	1,344	9.34
City of Sutton	Municipal	1,290	14,853	872	8.69
City of Syracuse	Municipal	1,506	19,590	1,217	7.69
City of Tecumseh	Municipal	1,768	23,108	1,051	7.65
City of Trenton	Municipal	516	6,263	427	8.24
City of Valentine	Municipal	2,986	47,402	1,825	6.30
City of Wakefield	Municipal	2,653	47,359	609	5.60
City of Wayne	Municipal	3,543	59,116	2,395	5.99
City of West Point	Municipal	3,167	54,926	1,860	5.77
City of Wilber	Municipal	1,078	16,423	968	6.56
City of Wisner	Municipal	1,110	14,716	718	7.54
City of Wood River	Municipal	857	11,300	699	7.58
City of Wymore	Municipal	864	12,188	884	7.09
Cornhusker Public Power Dist	Subdivision	23,975	357,471	9,162	6.71
Cozad Board of Public Works	Municipal	4,633	78,893	2,061	5.87
Cuming County Public Pwr Dist	Subdivision	7,274	91,931	3,907	7.91
Custer Public Power District	Subdivision	16,083	168,218	9,862	9.56
Dawson Power District	Subdivision	36,583	483,115	22,228	7.57

	Political				
Elkhorn Rural Public Pwr Dist	Subdivision	16,777	216,626	8,955	7.74
Fairmont Village of	Municipal	406	4,880	364	8.32
Fremont City of	Municipal	21,354	414,475	14,117	5.15
Grand Island City of	Municipal	48,463	688,887	24,172	7.03
Hastings City of	Municipal	30,132	477,656	12,953	6.31
High West Energy, Inc	Cooperative	9,368	99,082	3,037	9.45
Highline Electric Assn	Cooperative	7,842	70,434	1,959	11.13
	Political				
Howard Greeley Rural P P D	Subdivision	7,212	84,913	4,975	8.49
	Political				
KBR Rural Public Power District	Subdivision	7,209	69,821	4,357	10.32
LaCreek Electric Assn, Inc	Cooperative	409	5,809	216	7.04
Lexington City of	Municipal	11,149	198,276	4,096	5.62
Lincoln Electric System	Municipal	209,765	3,236,287	127,621	6.48
	Political				
Loup River Public Power Dist	Subdivision	56,975	1,124,447	18,436	5.07
	Political				
Loup Valleys Rural P P D	Subdivision	7,725	107,565	5,268	7.18
Madison City of	Municipal	2,990	64,286	988	4.65
	Political				
McCook Public Power District	Subdivision	13,035	226,346	4,709	5.76
Midwest Electric Member Corp	Cooperative	21,505	201,477	6,075	10.67
Minden City of	Municipal	2,488	26,826	1,567	9.27
Mitchell City of	Municipal	1,202	14,447	958	8.32
	Political				
Nebraska Public Power District	Subdivision	202,334	3,145,042	87,585	6.43
Niobrara Electric Assn, Inc	Cooperative	1,061	8,459	884	12.54
Niobrara Valley El Member Corp	Cooperative	9,049	108,775	5,732	8.32
	Political				
Norris Public Power District	Subdivision	40,591	636,208	18,417	6.38
	Political				
North Central Public Pwr Dist	Subdivision	8,195	95,582	5,191	8.57
	Political				
Northeast Nebraska P P D	Subdivision	16,553	254,475	8,238	6.50
	Political				
Northwest Rural Pub Pwr Dist	Subdivision	9,247	73,382	3,202	12.60
	Political				
Omaha Public Power District	Subdivision	623,649	10,173,367	339,657	6.13
Panhandle Rural El Member Assn	Cooperative	11,122	93,332	3,720	11.92
	Political				
Perennial Public Power Dist	Subdivision	18,237	273,565	7,312	6.67
	Political				
Polk County Rural Pub Pwr Dist	Subdivision	8,109	86,955	4,506	9.33
Reynolds Village of	Municipal	47	669	62	7.03
	Political				
Roosevelt Public Power Dist	Subdivision	5,581	57,294	3,013	9.74
Sargent City of	Municipal	522	6,197	498	8.42
Scribner City of	Municipal	976	11,883	529	8.22
	Political				
Seward County Rrl Pub Pwr Dist	Subdivision	6,916	82,589	4,691	8.37
	Political				
South Central Public Pwr Dist	Subdivision	12,109	154,246	7,431	7.85
	Political				
Southern Public Power District	Subdivision	60,932	925,497	26,298	6.58

Southwest Public Power Dist	Political Subdivision	13,093	167,387	5,718	7.82
Stanton County Public Pwr Dist	Political Subdivision	5,036	55,861	2,764	9.01
Twin Valleys Public Power Dist	Political Subdivision	7,651	80,468	6,032	9.51
Village of Arnold	Municipal	585	7,873	515	7.43
Village of Bartley	Municipal	309	3,661	186	8.44
Village of Bradshaw	Municipal	258	2,731	182	9.45
Village of Brainard	Municipal	306	4,401	220	6.96
Village of Callaway	Municipal	503	7,335	385	6.86
Village of Campbell	Municipal	262	2,488	243	10.53
Village of Chester	Municipal	203	2,150	207	9.44
Village of Davenport	Municipal	237	2,912	206	8.14
Village of De Witt	Municipal	1,325	18,315	301	7.23
Village of Decatur	Municipal	425	3,831	365	11.09
Village of Dorchester	Municipal	433	6,184	340	7.00
Village of Elk Creek	Municipal	63	941	61	6.70
Village of Endicott	Municipal	72	808	90	8.91
Village of Greenwood	Municipal	379	4,600	290	8.24
Village of Hampton	Municipal	319	4,179	264	7.63
Village of Hemingford	Municipal	812	8,097	570	10.03
Village of Hildreth	Municipal	153	4,150	245	3.69
Village of Holbrook	Municipal	215	1,908	156	11.27
Village of Leigh	Municipal	481	6,598	302	7.29
Village of Lyman	Municipal	607	6,287	281	9.65
Village of Morrill	Municipal	1,226	14,890	1,127	8.23
Village of Mullen	Municipal	442	5,597	387	7.90
Village of Oxford	Municipal	709	8,473	506	8.37
Village of Polk	Municipal	309	3,048	253	10.14
Village of Prague	Municipal	240	3,160	180	7.59
Village of Shickley	Municipal	267	3,244	248	8.23
Village of Spalding	Municipal	556	7,855	371	7.08
Village of Talmage	Municipal	160	2,430	138	6.58
Village of Walthill	Municipal	428	5,152	312	8.31
Village of Wauneta	Municipal	590	7,258	437	8.13
Village of Wilcox	Municipal	203	2,751	219	7.38
Village of Winside	Municipal	250	3,400	270	7.35
Wahoo City of	Municipal	3,219	60,518	2,296	5.32
Western Area Power Administration	Federal Political	3,601	164,827	16	2.18
Wheat Belt Public Power Dist	Subdivision	16,257	160,407	4,867	10.13
Wyrulec Company	Cooperative	2,398	27,081	468	8.85
Y-W Electric Assn Inc	Cooperative	692	5,987	72	11.56
TOTAL		1,894,447	28,210,989	988,232	6.58

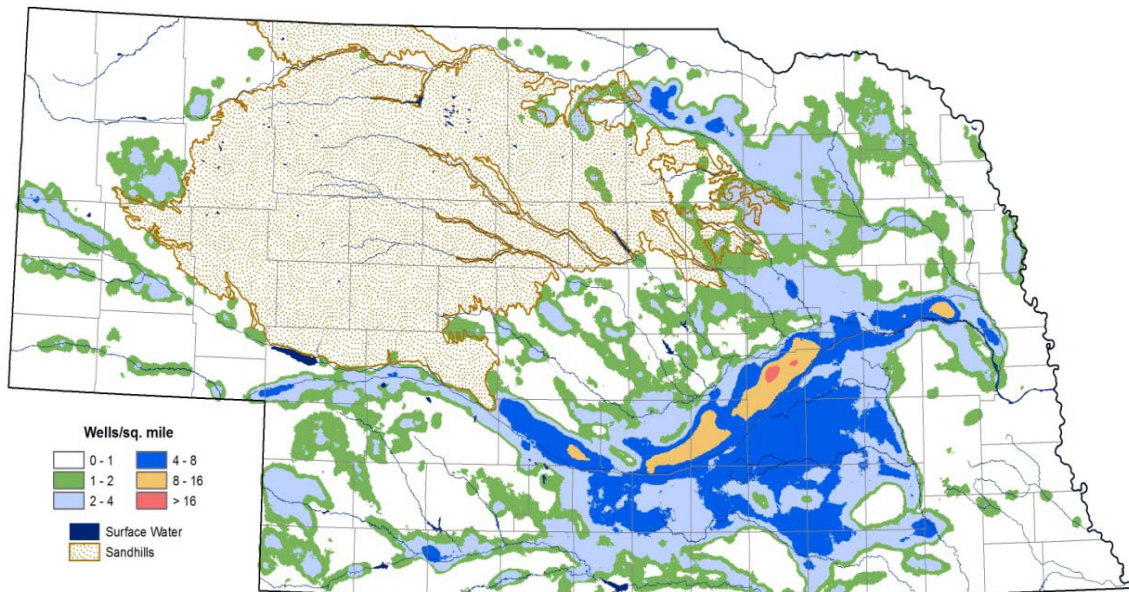
Percent of Electricity Generated Through Renewable Sources: 2007

Source: Renewable Energy Trends, 2007, Independent Statistics and Analysis, U.S. Department of Energy Information Administration

State	Percent of Electricity Generated	Rank
United States	8.5	-
South Dakota	50	4
Minnesota	8.4	14
Iowa	7.8	15
North Dakota	6.2	18
Colorado	5.7	21
Wyoming	3.3	32
Kansas	2.3	37
Nebraska	1.9	42
Missouri	1.4	45

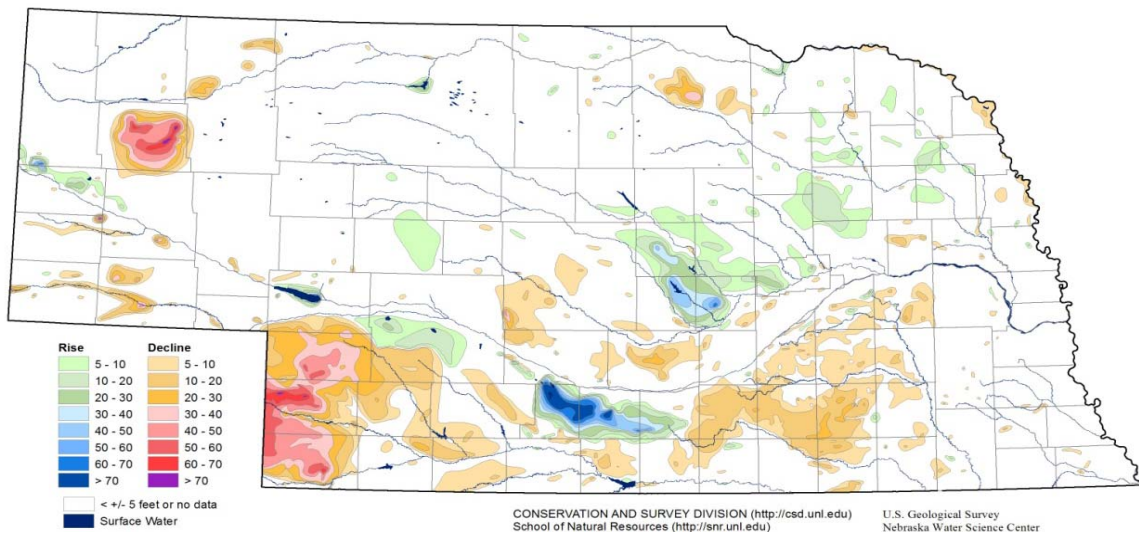
Note: Renewable sources include hydroelectric, geothermal, solar, wind, MSW/ landfill gas, wood/ wood waste and other biomass.

Density of Irrigation Wells: January 2009.



Density of Irrigation Wells. Map showing the density of active registered irrigation wells in Nebraska in wells per square mile as of January, 2009. Sources: Nebraska Department of Natural Resources; J.T. Korus and M.E. Burbach, 2009, Nebraska statewide groundwater-level monitoring report: Nebraska Water Survey Paper Number 76, Conservation and Survey Division, School of Natural Resources, University of Nebraska-Lincoln, 38 p.

Ground Water Level Changes: 2009



Groundwater-Level Changes: Map showing groundwater level changes in Nebraska from predevelopment to spring 2009. Predevelopment levels represent the approximate average water levels prior to irrigation development. This date varies from the early 1940's to early 1950's depending on location. *Sources: U.S. Geological Survey Nebraska Water Science Center; U.S. Bureau of Reclamation Kansas-Nebraska Area Office; Nebraska Natural Resources Districts; Central Nebraska Public Power and Irrigation District; J.T. Korus and M.E. Burbach, 2009, Nebraska statewide groundwater-level monitoring report: Nebraska Water Survey Paper Number 76, Conservation and Survey Division, School of Natural Resources, University of Nebraska-Lincoln, 38 p.*

